DOCUMENT RESUME

ED 354 393 CE 063 133

AUTHOR Stevens, David W.
TITLE Advancing Adult Workforce Skills: Opportunities and Requirements for State Action. EQW Working Papers.
INSTITUTION National Center on the Educational Quality of the Workforce, Philadelphia, PA.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 92
CONTRACT R117Q00011-91
NOTE 30p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Education; Decision Making; Futures (of Society); Government Role; *Labor Force Development; Models; Policy Formation; Prediction; Public Policy; Quality Control; *State Action; State Government; State Programs; Statewide Planning; *Strategic Planning; Trend Analysis
IDENTIFIERS California; Florida; *Recursive Models

ABSTRACT

State programs offer greatest promise for practical strategic actions to enhance the quality of the nation's adult work force. Three steps in the recursive process that create a model of state action are as follows: (1) documentation of the platform for action, which consists of current adult work force attributes and current institutional capacities to advance the quality of a state's labor force; (2) initial decision with respect to short-term work force quality goals; and (3) subsequent (recurring) decisions. The maturation of initiatives in two states--California and Florida--offers documentation of the instability that characterizes state efforts to address adult work force quality issues. According to the first step of the model, the state's role is to translate national demographic predictions into state-specific labor force quality implications. The goal should be to establish a combined early warning system and accessible intelligence network. An important component of the latter is an accurate inventory of current institutional capabilities. Recommendations for work force quality enhancement include the following: (1) investigate better uses of existing data systems; (2) document current institutional capacities to respond to work force needs; (3) explore the applicability of Canada's JOBSCAN concept; (4) expand the scope of reciprocal expectations from individuals and organizations receiving state benefits; (5) consider the consequences of expanding competency certification; and (6) join the Department of Defense in recommitment of military training funds to adult work force renewal. (Contains 58 bibliographic references and 60 endnotes.) (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

EQW WORKING PAPERS

ED354393

Advancing Adult Workforce Skills: Opportunities and Requirements for State Action*

by David W. Stevens

Director

Regional Employment Dynamics Center

Robert G. Merrick School of Business

University of Baltimore

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CE 063 133

*States don't act. People act, through many "voice" channels. Reference to *state action* here covers any individual or collective action that is intended to have statewide consequences.

BEST COPY AVAILABLE

"Advancing Adult Workforce Skills: Opportunities and Requirements for State Action"
EQW Catalog Number: WP02

The work reported herein was supported under the Education Research and Development Center program, agreement number R117Q00011-91, CFDA 84.117Q, as administered by the Office of Educational Research and Improvement, U.S. Department of Education. The findings and opinions expressed in this report do not reflect the position or policies of the Office of Educational Research and Improvement or the U.S. Department of Education.

Copyright © 1992 by the Trustees of the University of Pennsylvania

Contents

I. Overview and Introduction 1

II. A Recursive Model of State Action to Affect Adult Workforce Quality 3

III. Examples of Recursion 5

California's Employment Training Panel 5

Enterprise Florida 10

California and Florida—Once More 12

IV. The Importance of Step One in the Recursive Model of State Action 13

Current Adult Workforce Quality 13

Institutional Capacities to Respond 14

V. Toward Practical Recommendations 16

VI. Recommendations 17

Take Advantage of State Economies of Scale and Uniqueness 17

Create Clan-Proxies 19

Endorse a New Type of Federal-State Partnership 19

Endnotes 20

Bibliography 23

I. Overview and Introduction

This paper is about thinking and acting strategically (Dixit and Barry 1991). It is difficult to think strategically when immediate action is compelled by uncontrollable forces. Competing demands for time and resources overwhelm good intentions to engage in thoughtful contingency planning. Human nature causes us to miss opportunities to advance our own agendas. These lost opportunities are compounded when we fail to counteract unexpected events with deliberate responses. These observations apply to both individual and collective behavior.

Twenty-five years as a participant-observer in state planning, management, and assessment of human resource programs has revealed consistent patterns of independent action that cannot be characterized as strategically motivated. A recursive model[1] of this process is outlined in this paper. This model is then used to explain observed patterns in the maturation of state initiatives designed to affect adult workforce competitiveness. This historical record serves as a platform for recommending ways to promote more strategic thinking and action.[2]

A principal theme of this paper is that diversity of both circumstance and intention limits the applicability of one-size-fits-all solutions. The states exhibit different public and private capacities to respond to adult workforce needs. Governors, legislators, and other public and private voices favor different priority rankings. State economies differ in many respects; and the states' incumbent workforces differ in important ways. These differences represent a strategic challenge, but not an insurmountable barrier, to targeted state actions.

Five legacies from the 1980s constrain the recommendations that emerge at the end of this paper:

1. *Fiscal exigency coupled with public cynicism.* Poll results uniformly confirm the public's confidence that state economies will rebound. However, the timing, pervasiveness, and vigor of this growth will be uneven, within each state and among the 50 states. This is why Flynn's (1991, 105-123) life-cycle concept is important in the strategic action process. State revenue shortfalls shift attention from scouting about for new ideas[3] to making defensive choices between program maintenance and downsizing or elimination. Public cynicism that is not totally or easily reversible tightens the rein on new initiatives.
2. *Strong corporate/government coalitions.* These coalitions reflect a fundamental shift in the business community's expectations for state government sharing of traditional business hiring and training costs. To some extent, this is

a predictable result of basic competitive forces (e.g., exposure to intensified competition and the unbundling of production stages). However, the states encouraged this corporate response through their own leapfrogging behavior (see below for elaboration). These push-and-pull forces have created a mutually reinforcing bond that will limit future options.

3. *Reduced influence of employee advocacy.* This phenomenon extends far beyond the limited coverage of formal collective bargaining agreements to include government regulations, administrative enforcement practices, judicial interpretations, and other informal expressions of "voice."
4. *Public higher education schizophrenia.* This situation resulted from the simultaneous emergence of two forces. First, there was an unsustainable growth in public funding commitment; and second, the student constituency changed dramatically. Although this is identified as a constraining legacy, it can also be viewed as a rare opportunity to recast missions.
5. *A nascent coalition of private training vendors.* This coalition grew rapidly in response to the availability of federal and state government funds and corporate monies. The common interest of these vendors in retaining a place at the table is reflected in the recent merger of national associations and in highly visible investments in accreditation refinements. These vendors represent a constraint only in the sense that available resources will be spread among more parties. They represent an opportunity because they offer alternative sources of services.

Additional assumptions that define the context within which future actions will be undertaken include the following:

1. The observed quality of a state's adult workforce at any point in time is the cumulative result of many decisions made at different times by individuals and groups whose agendas are too diverse to be brought comfortably under a strategic action umbrella.
2. Both predictable events (e.g., elections and sunshine provisions in state laws) and unpredictable events (e.g., technological breakthroughs, realignments of international alliances, and the dynamics of consumer spending) result in a constant reshuffling of state opportunities and requirements to maintain and enhance adult workforce quality.
3. Governors and legislators will continue to create new programs and to redefine executive agency responsibilities. This results in a growing burden of "institutional baggage."
4. An easy and relatively safe way to carry out this "creation" is to replicate someone else's previous initiative. This follow-the-leader[4] behavior is a predictable result of knowing more about what others have done than about one's own state's need and capacity to act in this way. To date, these interstate differences have primarily been revealed ex post facto when legislative and administrative refinements occur.[5]
5. The political and bureaucratic rewards from action come almost entirely from the credibility and *expected* results of the initiative, not from the actual subsequent historical record. There are many reasons for this imbalance, including the tumult of events that hamper the after-the-fact documentation of cause-and-effect relationships.[6]
6. Most of the forces that affect the quality of a state's adult workforce do not arise from explicit intentions to broaden employment opportunity, to improve the rewards from work, or to promote statewide competitiveness. Recommendations that are intended to deepen the impacts of strategic thinking and action on adult workforce quality must recognize and be responsive to these forces.

II. A Recursive Model of State Action to Affect Adult Workforce Quality[7]

The state, as a political entity in the United States, offers great promise for practical strategic actions to enhance the quality of the nation's adult workforce. The state is already the locus of substantial legislation, regulation, oversight, and spending on adult education, employment and training, welfare, unemployment insurance, and related support services.

Three steps in the recursive process, or continuous flow, that have been extracted from 25 years of observation to create an abstraction, or model, are the following:

1. Documentation of, or assumptions about, the platform for action, which consists of:
   A. Current adult workforce attributes (e.g., where people are located within the state; what their educational attainment and work experience has been to date; their age profile as an indicator of the urgency of future replacement needs; and recent mobility patterns, both intrastate and interstate); and
   B. Current institutional capacities to advance the quality of a state's workforce (e.g., community colleges and other public postsecondary occupational education facilities; private career schools; community-based organizations that serve targeted segments of the adult population; and work-based learning sites).
2. An initial decision[8] (e.g., at the beginning of a gubernatorial term or legislative session) with respect to short-term adult workforce quality goals, which has both absolute and comparative features, including:
   A. Absolute thresholds of quality (e.g., pursuit of a uniform minimum literacy standard for all adults who come in contact with the state through JTPA, AFDC, Food Stamps, Unemployment Insurance, and Corrections programs); and
   B. Comparative standards (e.g., an intention to offer both incumbent and prospective employers the same packages of subsidized services as are offered by chosen competitor states).[9]
3. Subsequent (i.e., recurring) decisions to modify earlier targets and/or actions already taken to attain these targets; or, in many cases, decisions to introduce new goals and associated actions without any explicit reference to the previous initiatives.

This is the *recursive* feature of the process. To date, this step has rarely appeared to be cast in strategic terms. As was previously noted, this should not be surprising, given the imbalance between what is known about the array of possible new actions that might be taken and what is known about reliable indicators

of strategic corrections that ought to be made in order to remain in effective pursuit of previously defined goals.[10]

The timing of, and motivation for, these recurring decisions can be split into:

A. Those that are determined on one's own ground (i.e., that are taken in pursuit of one's own forward-looking positive agenda); and
B. Those that are forced either without substantial warning or after futile attempts to avoid responding (e.g., recessions; military base or plant closings and reductions-in-force).

The latter defensive actions drain resources away from the steady pursuit of previously established goals.

In the next section, this three-step recursive process is illustrated by examining the maturation of two states' initiatives with respect to adult workforce quality.[11]

Readers who are engaged in state human resources policy design and management are expected, at this point in the paper, to be experiencing a degree of uneasiness with the simplicity and abstraction of the three-step process that has been described. Step 2 is often taken with little or no attention having been given to step 1, which means the sequence is not obviously linear. The weights that are given to the A and B components of step 3—the recurring decisions—are unpredictable and therefore exhibit no obvious pattern. Precisely! This is why a more conscious effort must be made to introduce strategic features into this self-centered and loosely defined process.[12] Strategic elements can be introduced as bridges, or bonds, between the three steps.

Fosler's (1988, 4) characterization of a new economic role for states serves as a transition from this conceptual section to the applied illustrations of this abstraction in the next section:

> ... an emerging state economic role that is substantially different from the conventional one in three important ways:
>
> 1. ... In the new role, economic development is conceived as a process that occurs predominantly in the market driven private sector, but is affected in all its phases ... by a wide range of state actions, which cut across traditional functional lines.
> 2. ... In the new role, the state employs an active strategy to improve its competitiveness by confronting and taking advantage of prevailing economic forces.
> 3. ... In the new role, a fundamentally different set of institutional arrangements ... is used to accommodate the new strategic orientation, institutions that are more versatile and flexible in permitting the state to anticipate, specialize, experiment, integrate, evaluate, and adjust in dealing with new and changing economic forces.

Fosler (1988, 13) even recognized the emulation phenomenon that was highlighted earlier: "Over time, all of the states have tended to adopt the policies and institutions forged by the leaders, and thus, the basic economic role maintained a certain similarity from state to state."

The next section presents evidence that Fosler's mid-1980s conclusion about "new strategic orientation" and "institutions that are more versatile and flexible" was an overstatement and premature. When leadership is illustrated by most-recent-to-act examples, then judgments about versatility and flexibility may be extraneous. By definition, any initiative that lies outside the control of existing line agencies will be versatile and flexible, *until those agencies and other interested (i.e., unable to benefit) parties marshall their legislative and other political forces to corral the mustang.*

III. Examples of Recursion

California's Employment Training Panel

California's Employment Training Program (ETP) is justifiably famous as an innovative state initiative to advance adult workforce quality. The intent here is not to replough already tilled soil. Instead, selected aspects of ETP's nine years of maturation are described to illustrate two points made earlier: (1) the inevitability of structural refinement, and (2) the limited role of formal evaluation.[13]

It is ironic that the ETP legislation[14] was signed by the Governor during the third quarter of 1982, at the end of back-to-back recessions in 1980-1982.[15] The irony lies in the fact that the "window of opportunity" that opened to permit creation of the ETP was California's reaching an unemployment compensation trust fund level that triggered a mandatory cut in the unemployment compensation tax rate, which covered employers were then required to pay.[16]

Taking advantage of the 0.1 percent Employment Training Tax on employers who had positive balances in their unemployment compensation tax account,[17] the California Legislature simultaneously declared that "[t]here are [sic] an inadequate number of jobs in this state to meet the needs of those seeking employment" and "... there is an acute need for skilled workers in particular occupations."[18]

Three categories of eligible trainees were identified in the ETP's enabling legislation:

1. Unemployment insurance claimants;
2. Recent exhaustees of unemployment insurance who have remained unemployed; and
3. *Potentially displaced workers who would otherwise become unemployment insurance claimants* [emphasis added].[19]

The enabling legislation then continued with obligatory assurances that:

> [t]he funds made available by this chapter shall supplement but not displace funds available through existing programs conducted by employers themselves and public programs.... In addition, it is further the intention of the Legislature that programs developed pursuant to this chapter shall not replace, parallel, supplant, compete with, or duplicate in any way already existing approved apprenticeship programs.[20]

Unlike many other state programs that have been authorized specifically to solidify the role of public training entities,[21] the ETP's enabling legislation provides that "[n]othing in this chapter shall be construed to preclude any employer from contracting with any public or private training entity for services, subject to the approval of the panel." This set up a direct test of the accuracy of Fosler's detection of a new strategic orientation involving fundamentally different institutional arrangements.

Other important provisions in the ETP's enabling legislation include the following:

- Payments shall be made in accordance with a performance contract under which partial payments may be made during training, a partial payment may be made on placement or retention of each trainee, and not less than 25 percent of the negotiated fee is withheld until the trainee has been retained in employment for 90 days after the end of training with a single employer, except for those occupations in which it is not customary for a worker to be employed 90 consecutive days with a single employer.
- The Department of Economic and Business Development shall determine those firms considering locating or expanding businesses in the state in order to enable the Employment Training Panel to expedite the processing of contracts for these firms....
- The [ET] panel and the Department of Economic and Business Development shall agree within 60 days of the enactment of this subdivision to a statement of coordination and purpose relating to the mutual assistance to be provided by the [ET] panel and the Department of Economic and Business Development pursuant to this chapter.
- To assist the [ET] panel and the Legislature in assessing the impact of this chapter over an extended period of time, the Employment Development Department shall develop and maintain a continuous employment, wage, and benefit history of participants in projects authorized pursuant to this chapter and of a random sample of unemployment insurance claimants. The design of this history shall be subject to the review and approval of the [ET] panel and the review and recommendations of the Legislative Analyst.

A sunset provision required that the ETP remain in effect only until January 1, 1987, in the absence of statutory extension or deletion.

Statutory references to mandatory cooperation with the Department of Economic and Business Development and with the Legislative Analyst are the first hints of strings being attached to the otherwise largely autonomous Panel's actions.

At the outset, with a first-year budget of $55 million,[22] the Panel utilized Master Contractors to perform many of the outreach and management functions that were required to process training contracts. Included among these public-sector and private-sector Master Contractors were the California Manufacturers Association, the Los Angeles Community College District, and the Northern California Higher Education District. In other words, out of necessity to get underway,[23] the established players were called upon. These Master Contractors acted as agents, or brokers, on behalf of the Panel. In addition, the Panel entered into letters of intent to fund projects developed by such other entities as the California Department of Commerce, the Office of the Chancellor of Community Colleges, and the San Diego Regional Employment and Training Consortium (*Legislative Analyst* 1986). Individual trainees were selected by these contracting agents. No criteria, other than the tie to actual or anticipated unemployment compensation cost consequences, were imposed by the Panel.

It is ironic that the ETP, with its universal adherence to performance-based contract payment procedures, was quickly criticized for early failures to ensure that public funds were not being substituted for business investments that would otherwise have been made: "The Panel should have an independent review of its operational procedures and business data requirements to ensure that all feasible program accountability controls and necessary information systems are in place" (Young 1985, 34-37).[24] The very flexibility and responsiveness that appealed to the employer clients was immediately targeted as being incompatible with prudent public management standards.[25]

Other 1985 recommendations for corrective action (Young 1985, 34-37) included the following:

- The Panel should consider establishing goals and priorities for training programs;
- The Panel should review its process for determination of likely displacement;
- The Panel should review its method for determining the fixed fee price; and
- The Panel should conduct further follow-up on program completers past the 90 day retention.

The Legislative Analyst's 1986 review (p. 33) of Panel activities leveled a barrage of shots:

> In general, we conclude that the panel is *not* maximizing the use of ETP funds to attain legislative goals. Our review suggests that, due to vague program policies, ETP primarily trains *employed* individuals who probably do not qualify as employees "likely to be displaced...."
>
> Finally, we find that ETP's contribution to the state's economic development probably is minimal, primarily because there are few opportunities for training to dramatically improve the future health of a firm. We believe, however, that the panel could increase ETP's potential impact on the economy by intensifying its focus on assisting *small* business.

Here, the Legislative Analyst's Office has substituted unsubstantiated assertions (e.g., "there are few opportunities for training to dramatically improve the future health of a firm") for the Panel's vagueness. In addition, having concluded that there are few such opportunities, the Analyst's Office then endorsed an intensified focus on small businesses.

What is clear is that after just three years, advocates and adversaries were establishing their positions in anticipation of opportunities to amend the original enabling legislation. For example, in November 1986, just seven months after the Legislative Analyst's review appeared, a third-party vendor's independent assessment was released. The conclusions of this report (Training Research Corporation 1986, 10) include the following:

> The increase in earnings is estimated to have an economic impact of over 34.6 million dollars on the California Economy. In addition ETP participants received $550,000 less in UI benefits in the year after training, then [sic] in the year before.
>
> The substantial increases in earnings for participants, particularly those in the potentially displaced eligibility group indicate that ETP training has led to increased productivity among these workers.
>
> It appears from these preliminary results that ETP is meeting its goal of reducing unemployment, placing participants in secure well paid jobs and increasing productivity. But, more sophisticated research is needed to measure ETP's exact contribution.

Is it any wonder that evaluations have a limited impact on legislative actions? What is a legislator, who is assigned to perhaps five or more committees, to make of the Legislative Analyst's report and this contractor assessment?

In February 1986, with full awareness of the Legislative Analyst's forthcoming report schedule, the Panel voted to sponsor legislation to return $20 million from its 1985-86 legislative appropriation to the state's unemployment compensation trust fund account (Employment Training Panel 1986, 86). This "refund" was explicitly tied to administrative cost savings accrued through prudent management.

The Panel carefully educated members of the Legislature in its November 1986 report about how its preferred measures of effectiveness had been chosen to limit the undesirable effects that actual versus planned performance comparisons have in a dynamic economic context. Criticisms of unduly high levels of unencumbered funds were deflected by embracing these figures as evidence of alert management terminating spending flows when circumstances warrant.

BEST COPY AVAILABLE

The Panel's report to the Legislature also documented its interagency cooperative agreements with the California Department of Commerce, the Chancellor's Office of the California Community Colleges, and the Department of Education. The November 1986 report ended with the following paragraph (Employment Training Panel 1986, 70):

> To assist in this [marketing] effort, the Panel is exploring new approaches to marketing by seeking to contract with appropriate entities that will work to increase the Panel's outreach to business and labor in California. These outreach efforts will be conducted on both a statewide and local basis and include outreach to small and minority-owned businesses.

These statements, and behind-the-scenes refinements of its day-to-day practices,[26] document the Panel's sensitivity to the interests of potentially important constituencies who might have been overlooked in the frenzied early years of breaking new ground.

The four-year period from 1983 to 1986 can be looked upon, in retrospect, as a learning interval. The Panel members and staff had to improvise from the outset. Agents, trainees, and employers alike had to learn the ropes of the new program. And those who thought they were poorly served had time to rally their forces to gain a larger piece of the action.

The Panel's October 1987 *Newsletter* reported that "[a]fter months of discussion, the seven-member Employment Training Panel approved a statement on priorities and criteria for the allocation of training funds at its September meeting...."[27] Included among these priority provisions were the following:

- The Panel shall continue to give priority to training for expanding businesses, for businesses locating in the state, and for businesses locating in areas targeted for economic development by the Department of Commerce;
- The Panel shall continue to give special consideration in the evaluation of training contracts for funding to those that provide special opportunities to minorities, women, the disabled, and veterans;
- The Panel shall take full advantage of the results of its marketing contracts to continue and increase outreach to small, minority, and women-owned businesses, and to labor unions;
- In order to maintain a balance among all types of training the Panel shall target the allocation of approximately 30 percent of its funds for training for eligible participants who are unemployed at the start of training; and
- The Panel shall give priority in the allocation of training funds to training for employers as part of an overall policy or strategy to increase the competitiveness and productivity of the firm's California operations, and the security of employment for the firm's California workers.

This list includes 13 priority criteria! The fact that it took months of discussion to reach agreement on this statement of priorities is an indication of how susceptible the ETP program had become to quite traditional negotiation and compromise behaviors.

In October 1987, the Panel adopted new provisions that extended the normal period for ETP staff review of contractor requests for funding. This modification increased the required paperwork and lengthened the waiting period—jeopardizing two of the core elements in the Panel's marketing presentation.

A January 1988 contractor evaluation report (Moore, Wilms, and Bolus 1988, 55-57) offers four conclusions and recommendations:

1. First, the evidence suggests that training provided by the Panel probably results in reduced unemployment and increased wages, and thus increased productivity, for trainees. In the absence of a control group which received no training we cannot say with certainty that training *caused* lower unemployment and higher wages.
2. Second, the analysis revealed that individuals trained under the Employment Training Panel are more advantaged than those who enroll in JTPA Title III [Job Training Partnership Act dislocated worker] programs.
3. A third conclusion that can be drawn from this study is

that while individual and social efficiencies appear to be directly derived from the Panel's approach, general social equity may not. In fact, the pattern indicated in these findings is that training sponsored by the Panel is shifting to favor more advantaged, less-risky retrainers, over the less advantaged, more risky new-hires.

4. Finally, this study illustrated a method to track and evaluate the impact of changes in Panel policy.

Conclusions 2 and 3 provide additional evidence that the Panel's activities were now being judged by different criteria than were set forth in the 1982 enabling legislation. Conclusion 4 indicates how little attention had been given to the enabling legislation's mandate that "... a continuous employment, wage, and benefit history of participants in projects authorized pursuant to this chapter and of a random sample of unemployment insurance claimants" be maintained.[28]

The Panel's *July 1990 Annual Plan 1990-91*[29] notes that:

> [i]n 1982, when the State Legislature passed the legislation creating the Panel, California's average annual unemployment rate was nearly 10 percent, one of the highest rates in years. Among the reasons for this high unemployment rate was a number of devastating plant closures. These closures left hundreds of experienced, highly skilled persons unemployed. The initial focus of the Panel was to train these displaced workers for new employment in good, well-paying jobs. In the years since then, California's economy, and the persons who require training, have changed dramatically.... Businesses still have training needs, but the emphasis now is on maintaining a competitive edge by producing the highest quality product possible. The California economy today is being challenged by competition from other states and overseas. The state's success in meeting that challenge will depend largely on its ability to maintain and improve a skilled and productive work force. As a result, a growing number of businesses are requesting Panel funding for retraining existing employees.

Assembly Bill 28, effective in January 1990, requires the Panel to:

> provide for a cooperative network with other state and local agencies and set aside specific dollar amounts for upgrade training, demonstration projects, and projects that will retrain newly legalized aliens under the Immigration Reform and Control Act of 1986 (Stevens et al. 1981, 5).

The 1990-91 allocation of $100 million[30] was now earmarked in the following ways:

- 15.6 percent to new hires and those who had actually received layoff notices;
- 20.0 percent to small business projects;
- 20.0 percent to retraining programs;
- 20.0 percent to the California Supplier Improvement Plan (or similar programs)[31];
- 8.0 percent to Interagency Special Considerations[32];
- 5.0 percent to plant closure responses;
- 2.7 percent to upgrade training projects;
- 2.7 percent to demonstration projects; and
- 6.0 percent to Immigration Reform and Control Act projects.[33]

It is reasonable to conclude from this earmarking that the ETP program has adapted[34] to its environment (i.e., the Panel's allocations now reflect the cumulative influence over eight years of governors, legislators, and California's version of Kolderie's "spending coalitions"[35]).

A final important stipulation in Assembly Bill 28 is the following:

> [A]dditional standards shall provide that payments not be considered earned until a showing by the contractor has been made that the training has resulted in measurable productivity or other improvements that result in a net benefit to the California economy.[36]

This provision is a direct result of a multi-state demonstration project sponsored by the National Governors' Association.

The July 1990 Panel *Newsletter* reports that:

> [t]he Panel and the Chancellor's Office, California Community College/Economic Development Network recently have joined forces on two important projects. One is an interagency agreement designed to improve coordination between the two agencies. Under this agreement COCCC/ED>Net will develop a data base on college based Panel programs, prepare a marketing plan for use within the COCCC's five regions, prepare informational brochures, and conduct regional seminars about ETP targeted to community college staff and employers.[47]

Finally, the Panel's Summer 1991 *Newsletter* begins with the following sentence: "If there are two words that best describe the Employment Training Panel's goals for Fiscal Year 1991-92, they are 'Market' and 'Coordinate.'" The *Newsletter* continues:

> Many of these objectives emphasize the need for the Panel to take a more pro-active approach to addressing the needs of California's workers and businesses by marketing its program directly to those occupations, industries, and regions with the most potential for growth. The objectives also stress increased coordination with private industry councils, vocational education providers, business and labor organizations, and other government agencies.[48]

In addition to the previously cited funds allocation categories for 1990-91, the 1991-92 Budget Act requires the Panel to allocate $2.7 million "to train and employ participants in the Greater Avenues to Independence (GAIN) program."

The Panel's 1991-92 Plan also focuses on "an analysis of the economic and labor market trends for ten economic regions in California. These labor market regions represent areas with similar economic characteristics and employment patterns." Flynn's (1991a) research suggests that this analysis should focus on *firms within industries* because of life-cycle differences at the more aggregated level.

At the beginning of this subsection, it was stated that "selected aspects of ETP's nine years of maturation are described to illustrate two points made earlier: (1) the inevitability of structural refinement, and (2) the limited role of formal evaluation." The maturation chronology that has been described here documents both points. The recommendations found at the end of this paper[49] are intended to introduce more strategic thinking into the structural refinement process of state programs like the ETP. Given the predictable recursive process and what is known about life-cycle patterns, what practical changes can be made to promote the Panel's future contribution to California's economy?

Enterprise Florida

This subsection describes a very different chronology, but one that complements California's Employment Training Panel as an exemplar of the three-step recursive process. Florida's current status is particularly important as a platform upon which this paper's recommendations can be tested.

In 1968, Florida became the sixth state to establish an industry-specific training program.[50] The employer-eligibility criterion for funding through an Industry Services Training Program is that the business be new, expanding, or diversifying. The intent is to supplement ongoing vocational education programs in circumstances in which a local education agency could not be expected to have anticipated the need in a timely manner. Competitive rivalry comes into play in the determination of which local education agency will be given responsibility to conduct an approved training program. All training programs are conducted cooperatively, with the local educational agency taking responsibility for the required training or for training in a geographic area, or with the agency being designated by a regional coordinating council. From a state administrator's standpoint, this range of choice is a distinct strength.

In 1985, 17 years after the Industry Services Training quick-start program was authorized, the Florida Legislature passed a Sunshine State Skills Act, with an initial appropriation of $700,000, to be administered by the State Board of Community Colleges. An Economic Development Advisory Committee, appointed by the Community College Board, issues periodic requests for proposals from the state's 28 community colleges. The purpose of these grants is to provide "instructional programs that coincide with targeted current and future employer requirements." Participating businesses must at least match the grant amount, and sequential awards to a single business entity are permitted. For 1989-90, the Sunshine State Skills Corporation budget had increased to $3.9 million.[11]

The quick-start and request-for-proposals approaches are complementary in some respects and competitive in others. Timeliness of response distinguishes them, as does the requirement of an employer match in the Sunshine State Skills program. However, each competes for the same pool of general revenue funds that legislators are prepared to commit for economic development purposes.

These two generic industry-specific training initiatives were complemented in 1987 by the creation of a third public/private partnership program: Centers of Electronic Emphasis and Centers of Electronic Specialization (Grisham 1988). Fifteen Centers of Electronic Emphasis and sixteen Centers of Electronic Specialization were located at community colleges and vocational-technical centers throughout the state. Based on 1987 budgets for each of the centers operating in that year, these programs were receiving more than $4 million of state funds. The partnership involved the Florida High Technology and Industry Council, the Florida State Legislature, the Division of Vocational, Adult, and Community Education, the Division of Community Colleges, a private electronics industry, and the University of South Florida (Grisham 1988).

The purpose of the Centers for Electronic Emphasis was "to promote a climate of excellence in education, assure a supply of quality teachers, strengthen educational partnerships, and prepare students for a competitive world marketplace through state-of-the-art training in partnership with state-of-the-art industry guidance." The Centers of Electronic Specialization "were initiated to provide exemplary, industry based training in advanced or specialized electronics areas."

These complementary school-based and industry-based approaches in the electronics field were said to be just the visible tip of a public/private partnership iceberg. "A statewide replication plan has been implemented and long range goals are to develop centers in twenty-two [additional] community colleges and eighteen [additional] area vocational schools." In 1989, six additional occupational areas were under study for future development.

Florida's 1989 General Appropriations Act[12] directed Florida's Postsecondary Education Planning Commission to:

> conduct a study of the Sunshine State Skills and Industry Services Programs. The study shall analyze the goals, objectives, operating procedures and any measurable indicators of the effectiveness of the two programs.

In February 1990, the Postsecondary Education Planning Commission (1990, ii-v) offered 13 recommendations, including the following:

- In order to enhance coordination and communication between the Industry Services Training Program and Sunshine State Skills Program, [designated] individuals should serve as full voting members of both the Industry Services Advisory Council and the Economic Development Advisory Committee.... To further improve coordination of these two discrete programs, the SSSP should be limited to providing training to upgrade the skills of employees of diversifying and expanding businesses already located in Florida. Quick start programs for new industry should solely be the responsibility of ISTP.
- The advisory councils for the two programs should exercise particular diligence to ensure that (a) training

funded through the ISTP and SSSP is not already available through the local community college, school district, or private industry council, and (b) the training promotes economic development by providing specialized entry-level skills to new workers or supplemental skills to current employees whose job descriptions are changing or expanding.

- The authorizing legislation for the SSSP should be clarified to specify that the program should only be used to support those advanced technical skill training needs which are at a level commensurate with the postsecondary vocational programs offered by community colleges.
- No additional SSSP funding should be made available for management/supervisory or health care training until a determination is made that appropriate curricula and instructional materials are not already available.
- The [Florida Department of Commerce] Targeted Industrial Cluster List should continue to be used within the Industry Services Training Program and Sunshine State Skills Program.
- Both the ISTP and SSSP should require that the name and social security number of each person trained through ISTP and SSSP funds be collected and maintained by the state agency responsible for administering these programs.
- In addition to program completions and placements other indicators of effectiveness should be developed and monitored in each program by the state agency responsible for administering these programs.

The 1991-92 budget of the newly renamed Sunshine State Skills Productivity and Technology Program is only $550,000, and there is active consideration underway of combining this program with the Industry Services Training Program, and then relocating the consolidated program in a new administrative home. The Centers of Electronic Emphasis and Centers of Electronic Specialization programs are being dismantled. These changes indicate how vulnerable state initiatives are to fiscal exigencies and to changes in executive personalities.

In 1988-89, the Florida Chamber (1989) sponsored Cornerstone "to promote new strategic directions for Florida's future." This led, in turn, to SRI International's (1991, Aug. 26: 10) preparation of a strategic implementation plan entitled "Enterprise Florida." The stated rationale for Enterprise Florida is a "fragmented economic development system today" (i.e., fragmentation, lack of leadership, no critical mass). The recommended solution is to "create an integrating force to provide leadership, a means to network and leverage resources." The suggested framework for doing this is a reorganization of the basic way in which the state deals with industrial clusters, regions, service deliverers, and foundations (i.e., human resources, capital financing, technology research and development, physical infrastructure, tax and regulatory climate, and quality of life). The proposed new relations identify a Board of Directors for Enterprise Florida, with separate Research and Marketing branches to address regional service deliverers and statewide industrial clusters. The following five entities are seen as the building blocks for this initiative:

1. Florida Technology Partnership Corporation;
2. Enterprise Development Corporation;
3. Private Sector Risk Capital Partnership;
4. Florida Development Finance; and
5. Florida Training Partnership.

A three-year Migration Plan is proposed, with first year enabling legislation, funding, staffing, and strategic planning. This timing would be ideal for Florida's serving as a state laboratory for the recommendations that are proposed at the end of this paper.

California and Florida—Once More

These two chronologies have been offered as documentation of the instability that characterizes state efforts to address adult workforce quality issues. To some extent, what has been described can be characterized as a natural and desirable flexibility to remain responsive to changing economic conditions. However, much of the institutional modification is a consistent maturation phenomenon that has been observed in many other state settings. The goal of the remainder of this paper is to develop practical solutions to the current haphazardness of this recursive process.

IV. The Importance of Step One in the Recursive Model of State Action

The California and Florida case-histories of program maturation focused on step 2 (an initial policy decision) and step 3 (subsequent policy decisions) of the three-stage model. Neither of these examples provides much insight into the importance of step 1—an up-to-date understanding of a state's current workforce quality and public and private capacities to advance the level of quality. This subsection addresses these step 1 issues to complete the platform that is required before moving on to practical recommendations for state actions to promote adult workforce quality.

Current Adult Workforce Quality

The Hudson Institute's 1987 conclusions about the changes that will occur in workforce composition during the 1990s are well known (U.S. Department of Labor 1987)—slower overall growth; a rising average age and shrinking pool of young entrants; more women and minorities among the flow of entrants; and a substantial increase in immigration.

These conclusions are often repeated as if they are truths with uniform applicability in New York City; Snow Ball, Arkansas; Peculiar, Missouri; and La Jolla, California. In fact, the rate of growth and change in composition of a state's adult workforce are subject to *region-specific* forces that are beyond the direct control of state authorities[12] and that differ among regions. It is not clear, for example, whether a state's legislative and judicial actions create or reflect a particular environment of tolerance or intolerance.

The state's role is to translate these national demographic predictions into *state-specific* workforce quality implications. Flynn's life-cycle concept and recommendations are pertinent here, as is the analytical approach recently endorsed in Florida.

The objective should not be to describe *per se*.[13] Instead, the goal should be to establish a combined *early warning system* and *accessible intelligence network*, which complement each other. The early warning role is to alert both public and private parties to the apparent emergence of a new vulnerability in the state's adult workforce. This warning may be of three types: (1) detection of a totally new problem; (2) revelation of a new degree of severity of a previously identified problem; or (3) discovery of a significant change in the speed at which a problem is emerging. This early warning system, as a component of step 1

in the three-phase recursive model, would sound the alarm of a need for the decisive action of step 2.

The accessible intelligence network's role would be to step in after the alarm has been sounded. Once a need for step 2 action is recognized, there is usually an urgent scrambling for guidance about what to do. To some extent, this disarray is inevitable.[15] However, much can be done to establish and maintain a better quick-response capability in support of more informed step 2 (and step 3) decisions.[16] The recommendations section of this paper responds to that need.

Institutional Capacities to Respond

A pervasive deficiency at the state level is limited awareness of what public and private resources can be marshalled in response to a new adult workforce quality priority. An important component in the "accessible intelligence network" called for in the previous subsection is an accurate inventory of current institutional capabilities. The abstract difference of circumstance theme becomes very concrete here. The history of public and private postsecondary education is different in each state. Long before the current focus on industry-university consortia as a core feature in the states' arsenals,[17] the states were engaged in a vigorous competition to create occupational education opportunities for adults.[18]

Public vocational education in the United States is state-specific in governance, scope, and consequence. It is naive to engage in futile descriptions of the *role* for vocational education in this country. There is no single identifiable niche.[19] However, Brint and Karabel's conclusion about historical (and current) turmoil within community colleges applies equally well to area vocational technical schools, to vocational programs within comprehensive high schools, and to the vocational offerings of nonprofit, community-based organizations:

> [T]he community college has been buffeted throughout its history by the contradictory pressures of capitalism and democracy, efficiency and equality, and diversion and democratization, as it continues to be an arena of conflicting forces today. Although constrained both by organizational interests and the logic of the larger society in which it is embedded, the community college faces a future that is, to a considerable extent, a matter of choice (Brint and Karabel 1989, 232).

Today's excitement about Tech-Prep combinations of secondary and postsecondary occupational skills certification recalls Lester Thurow's (1976) observation 15 years ago:

> Because of the rational ever-present desire for higher quality workers, there will always be a market for those with background characteristics that indicate that they are superior to other unemployed individuals. In this environment occupational education may yield private benefits, it can certify superiority, but its social benefits will be zero. Every person trained and employed will simply displace someone else from the roles of the employed. Training will neither raise employment nor output. It merely reshuffles the unemployment.
>
> If those of you who are in occupational education ask where labor shortages will exist over the next five years, the only truthful answer is nowhere. Neither the normal growth of the economy or changes in its technology are going to create skills demands that cannot be met out of the existing pool of skills or out of simple informal on-the-job training....
>
> In an underemployed environment, all education is simply a certification process rather than a skill-creating process. You are playing a zero-sum game where the winner is not a person with some needed set of skills, but a person who can be certified that he or she is relatively superior to other perfectly competent job applicants. Occupational education will be privately successful (i.e., yield jobs and earnings) only to the extent that it is perceived as a superior source of workers. Does it generate good credentials?

It is left to others to debate the importance of zero-sum substitution effects in the states' adult workforce education and training initiatives. Each state, community college, area vocational-technical school, and the like is selfishly motivated. Let's

admit this, and then ask: Given these motives, what can be done to promote the three adult workforce qualities set forth in endnote 10—opportunity, incentive, and equity?

The current vogue is *choice*.[50] An increasingly important player in offering choice is the private vendor of occupational training services. Twenty-two years ago, A. Harvey Belitsky (1970, 15-16) wrote the following prophetic words:

> Private vocational schools are likely to experience consistent growth in enrollments and greater general acceptance as an important training resource for persons who do not attend college....
>
> The types of courses offered in these highly flexible schools will be a function of at least four factors. In the first place, the schools will continue to adapt to those areas of the economy undergoing expansion and innovation.... Second, and especially within a specific community, the private schools will offer those courses that are either not taught in the public schools or else are unavailable in sufficient number to meet the desires of students. The third factor is the extent to which public schools, and even colleges throughout the country, will decide to subcontract with the private schools for those vocational education courses which they cannot provide for their students. A fourth factor is both the increased corporate subcontracting of training with the schools plus the significant expansion in corporate purchase and operation of the schools. This factor is also likely to have an independent influence upon the general growth of the schools.

Twenty years later, Eurich (1990, 255-256) validated Belitsky's prediction:

> Clearly, adults are creating the biggest educational sector in the country and, spurred by economic necessity, their numbers entering classrooms in corporations, in military posts, union halls, government buildings, and on college campuses can only multiply....
>
> Until fairly recently the major providers have largely chosen to go it alone. Now, however, the same competitive forces that are driving the increasing need for training are driving the formation of alliances and other new ways to provide it....
>
> At all levels of training for workers in many types of jobs, more cooperative programs are being put in place. Some that have been going on for years are institutionalized and have fairly well-set patterns. But many, in fact most, of those we have described are new alliances, either improvising with the uncertain, experimental steps of ad hoc partners or dancing with controlled steps in a carefully designed choreography.

Other authors have elaborated[51] on the motives and forms of these alliances.

This turmoil represents a serious challenge to state policy makers. Independent actions, driven by self-interest motives, stir up dust that blurs our perception of what lies ahead. With few levers at hand to fine-tune the Rube Goldberg contraption we know as a state's workforce, both initial policy decisions (step 2) and subsequent decisions (step 3) can use a substantial infusion of information about what these independent parties are doing (step 1).

Again, state policy makers are expected to be frustrated at this point because no explicit commitment is made to a preferred organizational structure. What may appear to be wishy-washiness is actually an artifact of the observation early in the paper that "[t]he state, as a political entity in the United States, offers great promise for practical strategic actions." There *is* no uniform structure that will serve all states and constituent personalities with equal strength and reward. The diversities of circumstance and intention mentioned earlier are very real and important. What is uniformly applicable is the abstract characterization of a recursive process, which offers ample opportunities for strategic refinement.

Up to this point, the federal partner has been left out. It is apparent that another legacy from the 1980s is the "pushing down" of mandated financial responsibilities (e.g., welfare and health expenditures) from the federal level to the states. There is increasing evidence that the states, in turn, are withdrawing from traditional financial bonds with local jurisdictions (e.g.,

state support of local schools).[32] Examination of the financial underpinning of federal and state responsibilities for adult workforce quality is not undertaken here.

Having said this, it is important to recall the series of federal initiatives in the 1960s through the 1980s[33] that created new competing institutions with the specific intention of better serving targeted populations; fostered spending coalitions (Kolderie 1986) that lobby to perpetuate the flow of funds that had been triggered with little thought about the irreversible effects of quick problem-solving action; and promoted questionable evidence of change within existing institutions in response to eligibility criteria that place a premium on "new and improved" services.

V. Toward Practical Recommendations

Many recommendations for workforce quality enhancement are already on the table.[34] Quick action on some of these will create new state "breakaway" patterns, which will foster emulative waves that ripple across the country. The historical pattern of recursive behavior to date suggests that this follow-the-leader behavior will involve relatively little strategic thinking.

There is widely shared agreement that one of the important goals of state action should be to create a climate that is conducive to the successful (i.e., profitable) conduct of business. There are many ways to characterize this process. Henton and Waldhorn (1988, 227-228) distinguish between a traditional negative definition based on the absence of impediments to autonomous action and an alternative positive definition based on what is added. Flynn (1991a) distinguishes between defensive and innovative actions in the life-cycle context and complements this with Joseph Schumpeter's distinction between creative destruction (hastening the demise of noncompetitive endeavors) and creative reconstruction (promoting the emergence of competitive replacements for disappearing employment opportunities). Osterman (1990) distinguishes among entry, further, and remedial training because of the differences in public opportunities and responsibilities with respect to each. By whatever catchword, the issue is the same: What are some practical state opportunities and responsibilities to advance adult workforce skills in pursuit of this "climate"?

VI. Recommendations

In these times of severe fiscal stress, it is important to clearly define which responsibilities should be assigned to the local, state, and federal levels. The first grouping of three recommendations covers what is seen as a state's natural advantage compared with each of the other jurisdictional levels— *economies of scale* with respect to what would otherwise be duplicative local activities, coupled with a recognition of important interstate differences with regard to possible consideration of national acceptance of these responsibilities.

The second grouping of two recommendations includes ways in which a state can attempt to foster *sustainable proxies for the attributes of a clan*.[55] This is a greater challenge than the first grouping because high mobility rates in the United States limit the cohesiveness over time of a state's residents. The goal is to create a viable sense of "family" at the state level.

The sixth, and final, recommendation proposes a specific realignment of current federal-state relations. Here, advantage is taken of recent international events that have created a *window of opportunity* to act in a previously inconceivable way.

Take Advantage of State Economies of Scale and Uniqueness

Three recommendations are offered here; each is based on the criterion that *no one else will act if the states don't.*

Recommendation One. Each state should investigate how better use can be made of its already existing administrative data systems to add strategic "muscle" to public- and private-sector decisions that affect adult workforce quality.

There are two very different uses to which these data can be put. Recall the discussion in the section on "Current Adult Workforce Quality," which distinguished between the need for an *early warning system* and the need for an *accessible intelligence network*. Just as in the cases of lightning and earthquake sensors, what is needed here is a strategically driven "placement" of sensors about a state's labor market dynamics (i.e., possible adult workforce renewal needs). Flynn's life-cycle approach offers useful guidance in this regard. The early warning components of such a system would be for problem detection purposes (i.e., for sounding an alarm). The accessible

intelligence network components would support a more informed (i.e., strategically driven) response to this alert.[36]

There are many, very recent, state-specific examples of creative uses of these data sources (e.g., State Employment Security Agency wage records, both secondary and postsecondary school records, and employment and training program records).[37] These uses are a predictable response to the continuing plunge in data processing costs and to both mandated and "good citizen" voluntary changes in attitudes about previous restrictive standards for the release of these data. The states are strung out along a continuum of awareness of what can be done with these data. The states can also be placed along another continuum, based on their institutional capacity to bring these data to bear on policy issues. Both interest and ability must be present. This creates an obvious opportunity for higher-level leadership to reduce the costs each state must absorb to learn about what other states are doing.[38]

Recommendation Two. Each state should document what it is presently able to say about current institutional capacities to respond to identified adult workforce needs.

Again, states are arrayed along a continuum of timeliness, comprehensiveness, and accuracy of this type of information. State Occupational Information Coordinating Committees have accepted responsibility for this role in a number of states; however, none is known to reflect the types of life-cycle and skill-standard certification imperatives that appear in the Flynn (1992) and Sheets (1992) papers. Few of the states have made a serious attempt to maintain a current understanding of the magnitude and composition of student flows through private postsecondary career schools. Community college reporting systems are uneven in quality and timeliness.

There is a parenthetical intention hidden in the simplicity of this recommendation—those states that are shocked at how little is known about current institutional capacities to respond to adult workforce needs are urged to take necessary steps to correct these deficiencies. Symbolic action is not endorsed. Too much information of the wrong type is already collected. This has created substantial and irreversible cynicism among those who are asked to provide information to state authorities. If there is no intention to *use* new information in support of better policy decision making, then the information should not be sought for mere cosmetic purposes. Indeed, states would be well advised to offer a *quid pro quo* to data providers—that new information requests will be (at least) offset by deletion of unneeded information that is now collected.

Recommendation Three. States should investigate whether Canada's JOBSCAN concept would meet some of their important information needs with respect to the life-cycle dynamics of their state economies.

Canada's Employment and Immigration Commission is nearing the end of a decade-long developmental phase for a new occupational skills requirements/embodiments data base and a derivative occupational classification system.[39] Briefly, this JOBSCAN system consists of 91 occupation-specific (or occupational cluster-specific) check lists, which both employers and individuals complete. In principle,[40] these "employer requirements" and "individual attributes" create a data base that can then be used for a wide variety of diagnostic purposes concerning the dynamics of an economy.

Canada expects to introduce both the JOBSCAN data base and the derivative National Occupational Classification system in the fall of 1992, after additional prototype testing and personnel training. Ohio has recently issued a Request for Proposals for vendor assistance in the design and implementation of an Employment Service Automation Project, which incorporates the JOBSCAN concept as a core feature.

JOBSCAN should not be seen as an off-the-shelf panacea that can be adopted with little disruption of current labor market

information and labor exchange practices; however, it is a promising concept that warrants serious attention. Interstate differences that have been cited throughout this paper support the state as the appropriate level for action on this recommendation.

Create Clan-Proxies

Two recommendations are offered here.

Recommendation Four. States should expand the scope of reciprocal expectations from those individuals and organizations that accept benefits from the state.

It was previously noted that the business community has become much more savvy in recent years about how responsive governors and state legislators are to threatened reductions-in-force of incumbent employees and to prospects of expanded employment in either existing or new facilities. Other states are encouraged to follow the lead of California's Employment Training Panel in requiring contractors who receive ETP funds to provide the state with social security numbers of affected trainees, so they can then be tracked to determine whether and how they continue to contribute to California's economy.

At a different level of detail, but still in the spirit of reciprocity, it should be recognized that an extraordinary amount of information about *unsuccessful candidates* for jobs is lost once a hiring decision is made. If more can be learned about why those who are not chosen are dismissed, then a much better approach to remediation could be designed. The litigious nature of our society makes this a challenging proposal. Businesses will fear real harm from revealing accurate information about their personnel screening criteria. Anonymity could be promised, at least in a demonstration context.

Recommendation Five. States should carefully investigate the consequences that follow from the forthcoming expansion of competency certification.

There is one criterion that *cannot* be used in personnel screening practices: any universal attribute. Employers cannot sort, or distinguish among candidates, if all candidates offer the same measured level of competence. Employers will then be forced to rely on some other sorting criterion. As Thurow noted, credentials are fine for those who offer the preferred status and for those who are the recipients of this preference. The states have a compelling interest in knowing who will be the winners and losers in this competition.

This is not an argument against competency measurement *per se*. It is a warning that states must be alert to the group-specific fallout that might be expected to accompany this action. The anticipated spread of Tech-Prep programs warrants particular attention. What employment and earnings patterns will result for specific subgroups within the population of those who *enter* such a program track?

Endorse a New Type of Federal-State Partnership

Just one final recommendation is offered here, but last is not least. In many respects, this proposal offers the most promise for a fundamental breakthrough in how adult workforce quality advances are made.

Recommendation Six. The states should join with the U.S. Department of Defense in achieving a recommitment of funds and expertise from training military personnel to adult workforce renewal.

Like any organization that is facing a reduction-in-force, the military services will be receptive to a creative proposal for what they ought to do next. The large commitment of funds and skilled training personnel, both military-specific and unrelated to military needs, will be "up for grabs."

Just as Eisenhower sold the interstate highway system on national emergency preparedness grounds, so too can sustained renewal of the nation's adult workforce be justified. The money

need not be "taken away" from the Department of Defense, which has multiple adult continuing education units within the respective service branches. These service branches, however, are distributed unevenly throughout the states—thus the rationale for *state* partnerships with the U.S. Department of Defense, or more accurately, with the individual branches.

These federal-state partnerships could be expected to have more sustainable prospects than most. What better mutual bonding of interests than all Congressional Districts and the U.S. Department of Defense?

Endnotes

[1] *Recursion* in mathematics is a procedure whereby a succession of elements is determined by an operation on one or more preceding elements using an explicit rule. A *recursive* model reveals a process that can repeat itself indefinitely, or until a specified condition is satisfied.

[2] *Promotion* of strategic action in this sense does not mean advocacy for a thoroughgoing recasting of political and bureaucratic behavior. Instead, basic motives and revealed behaviors are accepted as "givens." Advantage is then taken of these motives and behaviors to "tinker around the edges" in practical ways that can be expected to have important consequences for a state's competitiveness as well as for its workforce members' opportunities to prosper through productive employment.

[3] One author recently characterized states that engage in this practice as *kleptocracies*. This was in response to Florida Governor Lawton Chiles' remark that "[p]olicy is something you steal from everybody" (see Golden [1991, 11 Aug.: 16]).

[4] Here *leader* means "first or most recent to act." Often, this definition of leadership is confused with best-practice action. Unfortunately, the quicker the emulative response, the less likely the follower is to know what the consequences of action will be.

[5] A goal of the recommendations offered at the end of the paper is to move more of this *awareness of differences* ahead of the adoption decision. This is one important aspect of the recursive process that is to be described—the *status quo* that one governor and legislative body leave as the result of their actions (and inaction) is the starting point for their successors.

[6] Those who advocate significant increases in resource commitments to program evaluation rarely offer cogent explanations for widespread disinterest in such activities. Why don't employers seem to know much about the productivity effects of their own investments in training? Pleas for a change in behavior would be well served by starting with a better understanding of current behavior.

[7] Reference to the "quality" of a state's adult workforce has little practical meaning without illustrative anchors that promote a uniform understanding of the goal that is sought. Here, four important elements of quality are proposed: (1) *opportunity*—the emerging rush to embrace competency measurement and work-based learning must be accompanied by a parallel interest in the breadth and depth of continuing employment opportunity; (2) *incentive*—both pull and push forces (i.e., carrots and sticks) are pertinent here; (3) *equity*—queuing rules are necessary in the absence of entitlement opportunity for all similarly qualified candidates, with widespread acceptance of these rules being an important dimension of quality; and (4) *productivity*—viewed here as a residual result of the other three elements, which is a reversal of the more common identification of productivity as an essential prerequisite that limits the extent to which the other three elements can be realized.

[8] The term *decision* should be interpreted as the observed outcome of both intentional (i.e., direct) and third-party choices. Recall the previous pessimistic conclusion that purposeful action to affect adult workforce quality must swim upstream against a strong tide of countervailing forces (e.g., low ceilings on private investments in productivity

enhancement that occur for many well-documented reasons, including weak bonds between employers and employees, and uncertainty about the future value of competencies acquired today).

[9] Two references serve to clarify what is meant here. The concept of a *constrained short-term choice of comparative workforce quality* can be likened to Michael Porter's concept of a nation's "choice of position" along a continuum of international competitiveness (see Porter [1990]). Nations don't "choose" any more than states exercise a precisely defined choice. Porter focuses on individual industries as a practical unit-of-analysis, which permits him to assemble useful comparisons among nations. While the industry unit-of-analysis is less applicable here, the concept of "choosing" a comparative target of adult workforce quality sharpens the subsequent introduction of the *recursive*, or repetitive, features of the model. This linear concept of a continuum is simply a modern adaptation of older "orbits of coercive comparison" terminology in the industrial relations literature (see Ross [1948]). This multi-dimensional concept assists in a visualization of those with statewide interests in adult workforce quality "scouting about" for appropriate comparative standards (e.g., what adjacent states are doing; or what vulnerable states are offering).

[10] Neither politicians nor other executive managers are rewarded for candidly admitting that "we're *still* trying to get a handle on that problem." Instead, each often opts to boldly assert that "we're going to break new ground." de Bono's eloquent phrase captures the essence of this behavior: "No one is paid to sit around being capable of achievement. As there is no way of assessing such capability, it is necessary to pay and promote according to visible achievements. Far better to dig the wrong hole (even one that is recognized as being wrong) to an impressive depth than to sit around wondering where to start digging." (See de Bono [1967].)

[11] Both of these examples require further elaboration and refinement. The key features of maturation that are presented here should suffice to illustrate the accuracy of the recursive model. This, in turn, will provide the platform upon which new *strategically defined* components can be assembled.

[12] Again, this is not an ivory-tower flogging of the inefficiencies and inequities that accompany our unique blend of public and private interests. Practical improvements can be achieved without provoking alarmed cries of "government intrusion" on private prerogatives.

[13] Use of the ETP as an exemplar of *limited evaluation* may surprise readers who know that the ETP is one of the most intensely scrutinized programs in the country (see documentation within this subsection). This is the point—if this is an example of heavy-handed evaluation, what does this say about the assessments of other programs?

[14] Assembly Bill 3461, which was signed into law on September 14, 1982. Assembly Bill 3154, authorized the Employment Training Fund (see California Statutes of 1982, Chapters 1074 and 1075).

[15] Also in 1982, California's community college system established an Employer-Based Training Program, the stated goals of which were to "provide training in new and emerging technological industries; provide training for unemployed, underemployed, those affected by economic dislocations and those with obsolete or inadequate skills; secure deeper commitment and involvement from the business/industrial community in support of employment training programs; [and] provide sufficient flexibility and encouragement to allow local colleges to respond to local needs in a variety of forms, such as new programs, high tech programs, securing facilities and equipment from industry, developing consortia of colleges or programs, or innovative group of programs and services" (see Chancellor's Office [1987]). This appears to be the "foot in the door" that ultimately led to the degree of interagency cooperation that is described in the following pages.

[16] The purpose of this trigger in all states is to offer the business community assurance that once an actuarially prudent trust fund balance is reached, the applicable tax rate will be cut as much as possible to maintain an equilibrium between the outflow of benefit payments to claimants and the continuing inflow of earmarked tax revenues. In fact, the determination of the appropriate trigger level is highly controversial, and the states' track records in maintaining trust fund solvency is uneven.

[17] This is *not* an unemployment compensation tax. It is a dollar-for-dollar substitution of a *new* tax for the simultaneous reduction in the unemployment compensation tax. This widely misunderstood distinction is important because there has been a long-standing debate about the merits of opening unemployment compensation trust fund accounts to withdrawal for training purposes. California's Employment Training Fund does *not* draw upon the unemployment compensation trust fund for this purpose.

[18] California Statutes Chapter 1074, AB 3461, Section 1.(a) and (b).

[19] California Statues Chapter 1074 AB 3461, Section 1.(d).

[20] California Statutes Chapter 1074, AB 3461, Section 1.(e).

[21] For example, Massachusetts' Bay State Skills Corporation, which was created in 1981 by the Massachusetts Legislature as a quasi-public instrumentality of the Commonwealth and was placed in the Executive Office of Manpower Affairs for administrative purposes. In this case, the Governor and his Secretary of Economic Affairs saw an opportunity in high-tech company chief executive officers' bemoaning the difficulties they were encountering in hiring technically qualified employees. This "window of opportunity" was to use this complaint as a legislative wedge to increase the relevance and responsiveness of the Commonwealth's vocational-technical schools, community colleges, and state colleges. Here, the enabling legislation asserts that the "... critical shortage of training and educational programs necessary to meet the growing needs of business and industry for skilled employees *... is occasioned by the inability of educational institutions to secure the resources necessary for the development and substantial expansion of programs of skills training and education which are consistent with employment need*" [emphasis added]. In other words, Massachusetts and California took the same evidence of a problem—an alleged shortage of skilled candidates for employment, and pursued totally

BEST COPY AVAILABLE

different paths. Massachusetts chose to offer a carrot to entice public presumptive deliverers of skill training services to engage in outreach to new customers in the high-tech business community.

[22] Assembly Bill 3154, which authorized the Employment Training Fund, placed this ceiling on the amount that could be placed in the Fund. Any excess revenues from this 0.1 percent tax were to be deposited in the state's unemployment compensation trust fund.

[23] And, not incidentally, to be sure that a continuing need for the appropriated funds could be demonstrated.

[24] Young (1985, 31) also noted that "the California Employment Training Panel has several strengths. Those described by participating employers included: the program's flexibility in meeting their specific needs; the quick response time to funding requests; and the lack of paperwork."

[25] This is a universal tension for state program managers (see Stevens [1986, 42]; and Ganzglass and Heidkamp [1986]).

[26] Such as legislative action to broaden the range of eligible recipients of training funds to include nonprofit and government employers who pay the Employment Training Tax. (See The Employment Training Panel [1986, 1].)

[27] The Panel's January/February 1988 *Newsletter* reported that it was only at "...the end of 1986 when, for the first time, the demand for Panel training assistance exceeded the supply of available funds and the Panel was forced to turn away prospective contractors."

[28] See the third bullet on page 21 in this paper for the statutory mandate. It was well known in 1982 how to implement this mandate. (See Stevens [1978, 217-241], and Stevens et al. [1981, 183-213]).

[29] This is the Panel's *first* published Annual Plan, mandated in Assembly Bill 28, which took effect January 1, 1990. This legislation also established new accountability standards and new priorities for funding.

[30] This figure includes the $55 million base allocation plus disencumbered funds and accrued interest on the Employment Training Tax funds.

[31] The California Supplier Improvement Plan is a state agency consortium approach to supporting small business suppliers to larger aeronautical, aerospace, and defense manufacturers.

[32] The *Annual Plan* reports that "[t]he Panel will give special consideration to training programs developed with the Chancellor's Office of the Community Colleges and the State Department of Education in these [California Supplier Improvement Plan] skill areas or to the development of standard curricula for these occupations that are shared among groups of small and medium sized employers."

[33] The last three funding categories were actually described by dollar amounts. Because the annual allocation was to be $100 million, these have been converted to percentages for consistency.

[34] Or, has been surgically altered to adapt.

[35] Kolderie (1986), in his study of "privatization," refers to the powerful joining of forces by those with a common (selfish) interest to gain advantage over the diffused interests of less attentive individuals and organizations.

[36] Section 10205(b)(5). (See Creticos, Duscha and Sheets [1990]; and Sheets [1991].)

[37] The other cooperative project between the Panel and the COCCC/ED>Net is the previously mentioned Supplier Improvement Program.

[38] This *Newsletter* also reports the 1991-92 funding level at $130 million.

[39] And in Flynn (1992) and Sheets (1992), also prepared for The University of Pennsylvania's National Center on the Educational Quality of the Workforce.

[40] Excepting Mississippi's introduction in 1936 of a "Balance Industry With Agriculture Act," which appears to be the pioneer among state industry-specific training programs, North Carolina's initiative in 1957 is generally acknowledged to have been the "breakaway" leader, soon followed by its neighbor to the south, and then by six other states over the next 12 years—all administered through state education agencies. Finally, Louisiana broke ranks in 1975, establishing the first such state program administered through a state economic development agency. Parts of this subsection are from Stevens (1989).

[41] The Industry Services Training Program budget at this time was $1.5 million.

[42] *In proviso* language accompanying Specific Appropriation 587 of the 1989 General Appropriations Act.

[43] See Krugman (1991, 81[2]: 80-83); and Barro and Sala-I-Martin (1991:1, 107-182).

[44] We are already inundated with figures, which are rarely subject to unambiguous interpretation or to easy combination with other figures or qualitative information.

[45] If the existence, severity, or timing of a problem is unprecedented, then there is unlikely to be a codified remedy available.

[46] The April 1, 1989 issue of *The Economist* included an article entitled "Lightning: flash cordon (lightning detection network)," which described the planned deployment of a satellite-based *Lightning Mapping Sensor* system. Sponsored in part by NASA and private utility companies, the detection network is to be designed to monitor the location, incidence, and intensity of lightning. These data are intended to permit a more efficient targeting of future investments in the prevention of damage to sensitive equipment and to reduce human risks. The deployment of earthquake sensors for identical reasons is well known.

[47] See Rosenfeld (1990, 6(2): 68).

[48] See McDonnell and Grubb 1991; Brint and Karabel 1989; Eurich 1990.

[49] Indeed, particularly since passage of the Carl D. Perkins Vocational and Applied Technology Act of 1990, it is becoming increasingly difficult to *define* the boundaries of "vocational" education.

[50] See Chubb and Moe (1990); Sheets and Stevens (1992).

[51] See Doeringer (1991); Osterman (1988); Industrial Relations Research Association (1987;1990); Creticos, Duscha and Sheets (1990).

[52] However, suits are pending in nearly a third of the states to force state equalization of education spending among school districts.

[53] Including the Area Redevelopment Act of 1961; the Manpower Development and Training Act of 1962; the Vocational Education Act of 1963; the Public Works and Economic Development Act of 1965; the Higher Education Act of 1965; the Comprehensive Employment and Training Act of 1973; and the Job Training Partnership Act of 1982.

[54] Including U.S. Department of Education (1991); The Commission on the Skills of the American Workforce (1990); The Secretary's Commission on Achieving Necessary Skills (1991); National Governors' Association (1991); Bosworth (1992); Osterman (1990); Carnevale (1991).

[55] See Ouchi (1984); Rosenfeld (1990). Briefly, two of the crucial features of an effective clan are a common core of shared values and a reliable social memory that connects current sacrifice with eligibility for future reward (and the mirror image of this—acceptance of a present reward being balanced by a willingness to accept future sacrifice).

[56] These are two very different requirements, as AT&T recently discovered the hard way. Sensors may be functional and appropriately placed, but someone has to be there to respond to the alarm.

[57] See David W. Stevens (1992); Baj and Trott (1991); Bross (1991); Stevens (1991); and Middlebrooks and Stevens (forthcoming).

[58] The National Governors' Association has already accepted leadership responsibility for parts of this scope-of-work. The National Commission for Employment Policy is also committed to a complementary role. Northern Illinois University has been working with states in the upper Midwest in a related capacity. The University of Baltimore is working with Mid-Atlantic states to form a sustaining consortium that can address common policy issues in a timely and efficient way.

[59] See David W. Stevens (Forthcoming).

[60] The *actual* usefulness of this check-list system depends upon the process through which employers and individuals complete the check lists, and upon what is done with this information once it has been collected.

Bibliography

Baj, John and Charles E. Trott. 1991. *A Feasibility Study of the Use of Unemployment Insurance Wage-Record Data as an Evaluation Tool for JTPA*. Washington, D.C.: National Commission for Employment Policy.

Barro, Robert J. and Xavier Sala-I-Martin. 1991. "Convergence across States and Regions." *Brookings Papers on Economic Activity*. 1991:1.

Belitsky, A. Harvey. 1970. *Private Vocational Schools: Their Emerging Role in Postsecondary Education*. Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research.

Bosworth, Brian. 1992. "State Strategies for Manufacturing Modernization." Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research.

Brint, Steven and Jerome Karabel. 1989. *The Diverted Dream: Community Colleges and the Promise of Educational Opportunity in America, 1900-1985*. New York: Oxford University Press.

Bross, Nancy. 1991. *Findings of the Technical Workgroup on Using Unemployment Insurance Wage Record Data for JTPA Performance Standards*. Chapel Hill, North Carolina: Research and Evaluation Associates, Inc.

Carnevale, Anthony P. 1991. *America and the New Economy*. Alexandria, Virginia: The American Society for Training and Development and the U.S. Department of Labor, Employment and Training Administration.

Chancellor's Office. 1987. *Report to the Legislature on the Employer-Based Training Program: 1986-1987*. California Community Colleges: Sacramento, California.

Chubb, John E. and Terry M. Moe. 1990. *Politics, Markets & America's Schools*. Washington, D.C.: The Brookings Institution.

Commission on the Skills of the American Workforce. 1990. *America's Choice: High Skills or Low Wages!* Rochester, New York: National Center on Education and the Economy.

27 BEST COPY AVAILABLE

Creticos, Peter, Steve Duscha, and Robert Sheets. 1990. *State-Financed, Customized Training Programs: A Comparative State Survey*. Washington, D.C.: U.S. Congress, Office of Technology Assessment.

de Bono, Edward. 1967. *New Think*. New York: Basic Books.

Dixit, Avinash and Barry Nalebuff. 1991. *Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life*. New York: W.W. Norton & Company.

Doeringer, Peter B. (ed.) 1991. *Turbulence in the American Workplace*. New York: Oxford University Press.

Employment Training Panel. 1986. *Newsletter*. June, 1. Sacramento, California.

—. 1986. *Report to the Legislature*. Sacramento, California.

—. 1988. *Newsletter*. Jan./Feb. Sacramento, California.

Eurich, Nell P. 1990. *The Learning Industry: Education for Adult Workers*. Princeton, New Jersey: Princeton University Press.

The Florida Chamber. 1989. *Cornerstone: Foundations for Economic Leadership*. Tallahassee, Florida: prepared by SRI International in cooperation with Data Resources, Inc., and MGT of America.

Flynn, Patricia M. 1992. "Competitive Strategies of States: A Life-Cycle Perspective." Philadelphia, Pennsylvania: The University of Pennsylvania, National Center on the Educational Quality of the Workforce.

—. 1991. "The Life-Cycle Model for Managing Technological Change." *Turbulence in the American Workplace* Ed. Peter B. Doeringer. New York: Oxford University Press.

Folser, R. Scott. (ed.) 1988. *The New Economic Role of American States: Strategies in a Competitive World Economy*. New York: Oxford University Press.

Ganzglass, Evelyn and Maria Heidkamp. 1986. *State Strategies to Train a Competitive Workforce: The Emerging Role of State-Funded Job Training Programs*. Washington, D.C.: National Governors' Association.

Golden, Tim. 1991. "Florida Governor Aims to Reinvent Ailing State." *The New York Times*.

Grisham, Jack R. 1988. *Centers of Electronic Emphasis and Centers of Electronic Specialization: A Public/Private Partnership Program*. Tampa, Florida: University of South Florida, Department of Adult and Vocational Education.

Henton, Douglas C. and Steven A. Waldhorn. 1988. "Inventing the Future Through Investment and Innovation" *The New Economic Role of American States: Strategies in a Competitive World Economy*. Ed. R. Scott Folser. New York: Oxford University Press.

Industrial Relations Research Association. 1987. *Human Resources and the Performance of the Firm*. Madison, Wisconsin.

—. 1990. *New Developments in Worker Training*. Madison, Wisconsin.

Kolderie, Ted. 1986. "What Do We Mean by 'Privatization'?" *Contemporary Issues Series 19*. St. Louis, Missouri: Washington University, Center for the Study of American Business.

Legislative Analyst. 1986. "A Review of the Employment Training Panel Program (Pursuant to CH 1074/82)." Sacramento, California.

Krugman, Paul. 1991. "History and Industry Location: The Case of the Manufacturing Belt." *American Economic Association Papers and Proceedings*.

McDonnell, Lorraine M. and W. Norton Grubb. 1991. *Education and Training for Work: The Policy Instruments and the Institutions*. Berkeley, California: The National Center for Research in Vocational Education, MDS-025.

Middlebrooks, Charles O. and David W. Stevens. (Forthcoming.) "A Multi-State Wage-Record Archive: Simultaneous Achievement of Economies-of-Scale, Quality Control and Data Base Security." *Building Information Partnerships: Conference Proceedings*. Washington, D.C.: National Governors' Association.

Moore, Richard W., Wellford W. Wilms and Roger E. Bolus. 1988. *Training for Change: An Analysis of the Outcomes of California Employment Training Panel Programs*. Santa Monica, California: Training Research Corporation.

National Governors' Association. 1991. *Excellence at Work: State Action Agenda*. Washington, D.C.

Osterman, Paul. 1988. *Employment Futures: Reorganization, Dislocation, and Public Policy*. New York: Oxford University Press.

Osterman, Paul. 1990. "Elements of a National Training Policy." *New Developments in Worker Training: A Legacy for the 1990s*. Madison, Wisconsin: Industrial Relations Research Association.

Ouchi, William G. 1984. *The M-Form Society: How American Teamwork can Recapture the Competitive Edge*. Reading, Massachusetts: Addison-Wesley.

Porter, Michael E. 1990. *The Competitive Advantage of Nations*. New York: The Free Press.

Postsecondary Education Planning Commission. 1990. *An Assessment of the Sunshine State Skills and Industry Services Training Programs*. Tallahassee, Florida.

Rosenfeld, Stuart A. 1990. "Regional Development, European Style." *Issues in Science and Technology*.

Ross, Arthur M. 1948. *Trade Union Wage Policy*. Berkeley, California: University of California Press.

Secretary's Commission on Achieving Necessary Skills. 1991. *What Work Requires of Schools: A SCANS Report for America 2000*. Washington, D.C.: U.S. Department of Labor.

BEST COPY AVAILABLE

Sheets, Robert G. 1992. "Building a World-Class Workforce in the United States: The Need for a National-State System of Occupational Skill Standards for State Workforce Preparation Programs." Philadelphia, Pennsylvania: The University of Pennsylvania, National Center on the Educational Quality of the Workforce.

Sheets, Robert G. and David W. Stevens. (Forthcoming.) "Developing Market-Responsive Vocational Education and Employment and Training Programs for America's Workforce." Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research.

SRI International. 1991. "Organizing for Economic Development in the 1990s: Implementing Enterprise Florida."

Stevens, David W. 1991. *Canada's National Occupational Classification Taxonomy*. Washington, D.C.: U.S. Department of Labor, Advisory Panel on the revision of the Dictionary of Occupational Titles.

—. (Forthcoming.) *Performance Measurement in Postsecondary Education: Employment and Earnings Outcomes*. Washington, D.C.: U.S. Department of Education.

—. 1978. "Performance Measurement in the CETA System," *CETA: An Analysis of the Issues*. Washington, D.C.: National Commission for Manpower Policy, Special Report No. 23.

—. 1986. *State Industry-Specific Training Programs: 1986*. Columbia, Missouri: University of Missouri.

—. 1989. *The Role of Vocational Education in Missouri's Economic Development: What Can We Learn From Other States?* Jefferson City, Missouri: Missouri State Council on Vocational Education.

—. 1991. *The Confidentiality Provisions of State Unemployment Compensation Laws*. Washington, D.C.: National Commission for Employment Policy.

Stevens, David W. et al. 1981. "Assessing the Effectiveness of Vocational Education and CETA Programs Through the Use of Routinely Available Administrative Data." *The Federal Role in Vocational Education: Sponsored Research* Washington, D.C.: National Commission for Employment Policy.

Thurow, Lester C. 1976. "Technological Unemployment and Occupational Education." Unpublished manuscript. Cambridge, Massachusetts: Massachusetts Institute of Technology.

Training Research Corporation. 1986. *ETP Participants' Earning and Unemployment Records: A Preliminary Analysis*. Santa Monica, California.

U.S. Department of Education. 1991. *America 2000: An Education Strategy*. Washington, D.C.: Government Printing Office.

U.S. Department of Labor. 1987. *Workforce 2000: Work and Workers for the 21st Century*. Washington, D.C.: U.S. Government Printing Office.

Young, Arthur. 1985. *Study of the California Employment Training Panel*. Los Angeles, California.

National Center on
the Educational Quality
of the Workforce

University of Pennsylvania
4200 Pine Street, 5A
Philadelphia, PA 19104-4090